driving said device with a non-test voltage;

performing a first operation with said sense amplifier during said step of driving said device with a non-test voltage;

driving said device with a test voltage that is lower than said non-test voltage; and

performing a second operation with said sense amplifier during said step of driving said device with a test voltage.

149. (New) A method of regulating a control device within a semiconductor device, comprising:

performing a first read operation on said semiconductor device;

driving a read control device with a first voltage during said step of performing a first read operation;

performing a second read operation on said semiconductor device; and

driving said read control device with a second voltage during said step of performing a second read operation.

REMARKS

Claims 1-138 are part of the original specification.

Claims 1-55, 57-72, and 75-138 are cancelled.

Claims 139-149 are added.

Claims 73-74 are amended.

Claims 56, 73-74, and 139-149 are pending as of this Preliminary Amendment.

In the interest of efficient prosecution, Applicants note that the pending claims are analogous to those pursued in a related application but rejected by the Examiner. (*See* U.S. App. Ser. No. 09/363,003 – both '003 and the current application stem from U.S. App. Ser. No. 08/855,555.) Applicants cancelled those claims in the '003 application to allow issuance of other claims therein. In this Preliminary Amendment, Applicants respond to the rejection of those claims as set forth in the Office Action dated 11/17/99 for the '003 application. A copy of the Office Action is included in an appendix to this Preliminary Amendment. The Examiner in rejected those

claims under 35 USC §102, relying on one of three references. Applicants address each basis for rejection separately below.

I. Rejection of claim based on the Hashimoto reference.

The Examiner rejected claim 56 as being anticipated by Hashimoto (U.S. Pat. No. 5,689,467). Applicants contend that the claim contains limitations that Hashimoto fails to disclose. For example, claim 56 requires acts such as driving a control device with a first voltage and driving that control device with a second voltage. The Examiner's brief application of Hashimoto cited its V_{REF} and EXT V_{REF} sources. (*See* Office Action dated 11/17/99 at p. 2 (devoting only 4 lines of text to applying Hashimoto and mistakenly referring to "claim 1").) However, the Examiner merely announced that Hashimoto discloses a control device without expressly citing a particular component of Hashimoto. Lacking such articulation, Applicants contend that the Examiner has failed to meet the *prima facie* burden for rejection. Moreover, Applicants contend that the burden *cannot* be met relying on Hashimoto. Specifically, Applicants note that Hashimoto merely applies its voltages V_{REF} and EXT V_{REF} to BITLINE and BITLINE_. (Hashimoto at col. 3, ln. 53-57; FIG 3.) Applicants contend that Hashimoto is silent concerning driving anything arguably analogous to a control device with the cited voltages.

II. Rejection of claims based on the Fink reference.

The Examiner rejected claims 73-74, 139-141, and 143-148 as being anticipated by Fink (U.S. Pat. No. 5,500,824). Applicants contend that the claims in their current state contain limitations that Fink fails to disclose.

Claim 73, for example, now requires that the voltage reception device include a first, second, and third terminal, wherein the device is configured to couple to a memory cell by way of the first terminal, further configured to couple to an equilibration voltage at the second terminal, and selectively coupled to a first test voltage at the third terminal. Moreover, claim 73's voltage reception device is configured to allow a signal transmission between the first terminal and the second terminal in response to a voltage applied to the third terminal. In the 11/17/99 Office

Action for the '003 application, the Examiner cited Finks' elements 102, 106 as a proposed analogy to claim 73's voltage reception device. Applicants contend that, with the clarifications added by this Preliminary Amendment, that analogy is untenable.

Claim 74 as presented in the '003 application already included limitations that Fink fails to disclose. Specifically, claim 74 has always required a voltage reception device that is selectively electrically communicative with a first test voltage path and a second test voltage path. Claim 74 has always further required that the voltage reception device be configured to electrically interpose between said equilibration device and said digit line pair. Applicants contend that the Examiner's brief attempt at applying Fink does not address these limitations and therefore fails to satisfy the *prima facie* burden for rejection in reliance on this reference. (*See* Office Action dated 11/17/99 at p. 2-3 (devoting only 6 lines of text to applying Fink (only four of which are applied to claim 74).)

Claim 139 has now been clarified to require coupling the relevant control device to a sense amplifier. Moreover, the claim's performing acts are directed to tests on that sense amplifier. Still further, dependent claim 140 incorporates those limitations and expresses another directed to the sense amplifier. Dependent claim 141 incorporates claim 139 and 140's sense amplifier limitations and expresses yet another directed thereto. Applicants contend that Fink fails to disclose such limitations.

Claim 143 has also been clarified to include limitations directed to a sense amplifier. Specifically, claim 143 requires testing a sense amplifier with a transistor driven at a first voltage, wherein the claim's preamble indicates that the transistor couples the sense amplifier to a voltage node. Applicants contend that Fink fails to disclose such a limitation.

Claim 144 as presented in the '003 application already included a limitation that Fink fails to disclose. Claim 144 has always addressed a method of regulating a transistor within a semiconductor device. One of the acts claim 144 has always required concerns driving the transistor with a first voltage. More specifically, claim 144 has always expressly required that act to comprise driving a bleeder device. Applicants contend that the Examiner's brief attempt at applying Fink does not address this limitation and therefore fails to satisfy the *prima facie* burden for rejection in reliance on this reference. (*See* Office Action dated 11/17/99 at p. 2-3.) Accordingly, the only difference between the current claim 144 and claim 144 in the '003

application is that the current claim 144 is in independent form, expressly incorporating the limitations of '003's claim 143.

Claim 145 of the current application is also in independent form, again in contrast with '003's claim 145. Moreover, the current claim 145 is clarified to require an act of driving a voltage-pulling transistor of a sense amplifier. Applicants contend that Fink fails to disclose such a limitation. Dependent claims 146 and 147 incorporate this limitation and benefit accordingly.

Claim 148 has been clarified to address a method of regulating a device for a sense amplifier, comprising acts such as performing a first operation with the sense amplifier during an act of driving that device with a non-test voltage; and performing a second operation with the sense amplifier during an act of driving the device with a test voltage. Applicants contend that Fink fails to disclose such limitations.

III. Rejection of claims based on the Yuh reference.

The Examiner rejected claims 142 and 149 as being anticipated by Yuh (U.S. Pat. No. 5,646,880). Applicants contend that flaws in the Examiner's reasoning warrant withdrawal of this rejection. First, Applicants note that the Examiner's brief application of Hashimoto cited its V_{EXT} and V_{INTL} sources. (*See* Office Action dated 11/17/99 at p. 3 (devoting only 5 lines of text to applying Yuh).) However, the Examiner merely announced that Yuh discloses a control device without expressly citing a particular component of Yuh. Lacking such articulation, Applicants contend that the Examiner has failed to meet the *prima facie* burden for rejection.

The Examiner also announced that the Yuh's "control device" (whatever that may be) is being driven by the cited voltages. Assuming *arguendo* that the Examiner intended to cite Yuh's circuitry coupled to V_{EXT} and V_{INTL} as disclosing the control device, a careful review of Yuh's circuitry, combined with an ordinary artisan's understanding of the term "driven" as applied to Yuh, demonstrate that Yuh fails to support the Examiner's assumptions. Applicants note that the circuitry in Yuh coupled to the cited voltages V_{INTL} and V_{EXT} consists of two p-channel transistors – elements 12 and 13 of Yuh's Fig. 1. More specifically, the source terminals of Yuh's transistors 12 and 13 are respectively coupled to the cited voltages V_{INTL} and V_{EXT}.

Significantly, the gates of Yuh's transistors 12 and 13 are respectively coupled to control signals SEPI and SEPE. Applicants contend that, when an ordinary artisan considers how Yuh's transistors 12 and 13 are being driven, such an artisan would look to what is applied to the transistors' gates rather than to their source. (*See* U.S. Patent 5,604,704 by Atsumo at col. 2, ln. 18-19; col. 4, ln. 57-60; col. 7, ln. 5-7; col. 8, ln. 52-55; col. 10, ln. 22-30; claim 4; claim 6; claim 9 (all teaching supplying a "drive" signal to the gate of a transistor). Applicants included a copy of Atsumo in an Information Disclosure Statement submitted concurrently.) More significantly, when Yuh's transistors 12 and 13 are being driven by SEPI and SEPE, Yuh fails to disclose that such signals exhibit a plurality of voltages. Rather, Yuh merely expresses that they are made "active low" in logic. (Yuh at col. 2, ln. 58-60.) As a result, Yuh fails to disclose a control device being driven by the V_{EXT} and V_{INTL}.

The Examiner intended the five-line application of Hashimoto to apply to claim 149 as well as claim 142. Applicants contend that the flaws in the Examiner's reasoning articulated above support the withdrawal of this rejection against both claims without comment on their scope.

CONCLUSION

In light of the above amendments and remarks, Applicants submit that claims 56, 73-74, and 139-149 are allowable over the applied references. Therefore, Applicants respectfully request reconsideration of the Examiner's rejections and further requests allowance of all of the pending claims. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact Applicants' undersigned attorney at the number indicated.

Respectfully submitted,

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Appendix 1: Marked version of amended claims

73. (Once amended) A voltage regulator for a memory circuit including an equilibration device, a digit line pair, and a memory cell, comprising:

a voltage reception device comprising a first terminal, a second terminal, and a third terminal, wherein:

said voltage reception device is configured to couple to said memory cell by way of said first terminal, said equilibration device and at least one line of said digit line pair [circuit],and wherein said voltage reception device is further configured to couple to an equilibration voltage at said second terminal; [and]

said voltage reception device is selectively [electrically communicative with] coupled to a first test voltage at said third terminal [path and a second test voltage path]; and

said voltage reception device is configured to allow a signal transmission between said first terminal and said second terminal in response to a voltage applied to said third terminal.

74. (Once amended) [The voltage regulator in claim 73,] A voltage regulator for a memory circuit including an equilibration device, and a digit line pair, comprising:

a voltage reception device, wherein:

said voltage reception device is configured to couple to said memory circuit; and

said voltage reception device is selectively electrically communicative with a first test voltage path and a second test voltage path;

and wherein said voltage reception device is configured to electrically interpose between said equilibration device and said digit line pair.

Appendix 2:

Office Action dated 11/17/99, for U.S. App. Ser. No. 09/363,003.